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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Activities Report
of the Air Quality Bureau

September, 1977

STATE DOCUMENTS
NOV 1 77

1. Highlights

New open burning regulations and information pamphlets were sent to concerned parties.

Work is continuing on the Health Study portion of MAPS.

2. Ambient Air Quality Network

a. Standards Exceeded:

SO₂ from company stations near Anaconda Smelter

State 1-hour	47
State 24-hour	6
Federal 24-hour	2
Federal 3-hour	2

SO ₂	<u>Mill Creek</u>	<u>Hy. Jct.</u>	<u>C-Hill</u>	<u>Post Office</u>
Highest 1-hour reading	---	0.80	2.39	0.46
No. of Excr. over 0.25 ppm	---	21	18	4
Highest 24-hr average	---	0.10	0.13	0.04

CO Alpine West - ppm

High 24-hour average	0.81
High 1-hr average	8.5

b. Air Stagnation Advisories:

None for September. The smoke dispersion forecasts were initiated on September 12. There will be two forecasts a day this year, one at 9:00 a.m. and one at 1:30 p.m.

c. Laboratory Status:

Total Samples for Month: 260
Total Determinations for Month: 862

d. Developments:

EPA contract for sulfate and nitrate is now completed. An audit was completed for sulfate and nitrate.

Four days were spent in Denver attending a Quality Assurance course.

3. Permits and Tax Credits

a. Construction Permits - Applied for:

Kaiser Cement, Montana City, coal-handling equipment
Meyer Construction, Wibaux County, asphalt plant
Meyer Construction, Carbon County, asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
Hilde Construction, Powell County, gravel crusher and asphalt plant
American Colloid Company, Malta, facilities for milling ore
McIntyre Construction, Jefferson County, asphalt plant
J & D Lumber, Polson, boilers
Westco Refinery, Cut Bank, Steam generator
Francis Muggli, Inc., Valley County, gravel crusher
Louisiana Pacific, Trout Creek, fuel cell and boiler
Petrolane/Perry Gas Processing, Sidney, gas compressor, regeneration unit
\$15,000
Wickens Brothers, Hill County, gravel crusher
Wickens Brothers, Hill County, gravel crusher
Wickens Brothers, Hill County, asphalt plant

Approved:

Pack Concrete, Inc., Flathead County, asphalt plant
Montana-Dakota Utilities, Glendive, gas turbine power plant
Meyer Construction Company, Beaverhead County, asphalt plant
Peter Kiewit Sons, Lincoln County, asphalt plant
Baltrusch Construction, Powell County, asphalt plant
Gus Albert, Roosevelt County, gravel crusher
Gus Albert, Roosevelt County, asphalt plant
Gus Albert, Roosevelt County, gravel crusher
Wickens Brothers, Treasure County, gravel crusher
Meyer Construction, Wibaux County, gravel crusher
Meyer Construction, Richland County, gravel crusher
Portable Pavers, Inc., Dawson County, asphalt plant
Texaco, Inc., Hill County, natural gas treating facility
Francis Tindall Construction, Fergus County, gravel crusher
Super Save Market, Helena, incinerator
Pack and Company, Flathead County, asphalt plant
Meyer Construction, Wibaux County, asphalt plant
Meyer Construction, Carbon County, asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
McIntyre Construction, Jefferson County, asphalt plant
Westco Refining, Cut Bank, steam generator
Francis Muggli, Valley County, gravel crusher

b. Operating Permits: None

c. Tax Credits: None

4. Variance Status

a. Current:

SO₂ variance for Anaconda Company renewed at January Board meeting. It expired on June 30 and a request for renewal has been scheduled for the November Board meeting.

Anaconda's application for variance from visibility rule for smelter has been scheduled for November Board meeting.

ASARCO, Inc. received a variance at September Board meeting for smelter operation. ASARCO agreed to fund a study for \$25,000 on acid plant effects as a condition for granting the variance.

Anaconda Aluminum, Columbia Falls, F- and particulate, expires June 30, 1978.

b. New: None

5. Enforcement Actions

a. Citation:

Cenex, Billings, failure to test tail gas incinerator
Hoerner-Waldorf, Missoula, TRS-#3 Recovery, 7/27/77, S1400
Evans Products, Missoula, Veneer Dryer #4, 9/8/77, S1460
Evans Products, Missoula, Veneer dryer #4, 9/19/77, S1460
ASARCO, Inc., East Helena, MT-770902-HK-1 and 770902-HK-2, smelter in violation of Federal 24-hr. sulfur dioxide ambient standards.
Empire Sand and Gravel, Billings, 770907-BR-1, asphalt plant in violation of rule 16-2.14(1)-S1460 (visible air contaminants, restrictions)
Louisiana Pacific, Deer Lodge, 770909-DH-1, tepee burner in violation of rule 16-2.14(1)-S14030 (Wood Waste Burners)
McIntyre Construction Company, Great Falls, 770906-HK-1, asphalt plant in violation of rule 16-2.14(1)-S1400 (Permits, Construction and Operation of Equipment)

b. Notice of Violation:

Zook Brothers Construction Co., asphalt plant, east of Anaconda, Visible Air Contaminants, Restrictions

c. Order for Corrective Action:

Zook Brothers Construction Co., asphalt plant, east of Anaconda, November 1, 1977.

d. Court Actions: None

6. Tepee Burner and Open Burning

Tepee Burner Inventory:	No. at start	39
	New starts	0
	Shutdowns	0
	No. at end	39

6. Open Burning, cont.

Burning Permits for September

Flathead County	118	Missoula County	15
Lake County	30	Yellowstone County	15
Sanders County	84	Rest of State	361
Cascade County	9	Total	632

Pamphlet on open burning was distributed to persons issuing air quality permits.

7. Source Tests Performed

a. Agency Source Tests: None

b. Non-Agency Source Tests:

Hoerner-Waldorf, Missoula, 26 particulate tests on recovery boilers, lime kilns, smelt tanks, slakers and hogged-ruel boilers

Meyer Construction, Hardin, opacity test at asphalt plant. Their plant in Belfry was instructed to retest.

8. Field Investigations

Peter Kiewit and Sons, batch plant, scrubber problems, plant shut down.
Zook Brothers Construction, East of Anaconda, asphalt plant, documentation
McIntyre Construction, Elk Park, asphalt plant, documentation
McIntyre Construction, Elk Park, asphalt plant, citation issued, no permit
Castle Mountain Lumber, White Sulphur Springs, tepee burner, documentation
Willow Creek Lumber, Livingston, tepee burner, complaint follow-up
Burkland Studs, Livingston, tepee burner, documentation
Empire Sand & Gravel, West of Livingston, asphalt plant, citation issued
Wickes Forest Industries, Townsend, tepee burner
Kiewit Sons, asphalt plant, investigation continuing
Brand S Lumber, Livingston, tepee burner, investigation
Empire Sand & Gravel, west of Livingston, asphalt plant, re-investigation
Helena Sand & Gravel, Helena, asphalt plant, investigation
Maronick Construction, Montana City, crusher, complaint follow-up
Diamond Asphalt, Chinook, oil reclamation site, request to open burn
S & W Sawmill, Darby
Del Conner Lumber, Darby
Louisiana Pacific, Deer Lodge
Hardin-Meyer Construction Company, asphalt plant
Cenex, Billings, sulfur plant
Conoco, Billings, FCC unit

9. Complaints

Willow Creek Lumber, Livingston, tepee burner, fugitive particulate, investigation
Kiewit Sons, Helena, asphalt plant, visible air contaminants, restrictions, investigation

Maronick Construction, Montana City, crusher, fugitive emissions, investigation.

10. Data Processing Services

- a. Ambient Data Summary: See attached
- b. Emission Inventory Status:
Slash burning information is beginning to arrive.
Updates received and processed. Semiannual report sent to EPA.
- c. Prevention of Significant Deterioration: None
- d. Modeling: None

11. Environmental Impact Statements

- a. Agency Impact Determinations: Colstrip 3 & 4 addendum is ongoing-target date of October, 1977
- b. Other Agency EIS's reviewed: None

12. Status of Studies, Contracts and Reports

Columbia Falls Study - Acoustic radar repaired in Kalispell
Poplar River Study - final budget for FY 78 prepared and sent to EPA.
Analysis of background data and references was made for first-year report.
Annual Air Quality Summary for 1976 was printed and distributed.
ASARCO, Troy - sampling stations operational, three bi-monthly progress reports sent.
Billings CO/TSP, Missoula TSP - Reviewed with EPA
S.E. Coal TSP - draft document of control measures was finished.
MAPS, Emission Inventory is prioritized and being organized for contract bid.
MAPS - Air Monitoring Committee reviewing site selection in Billings.
Rockwell International has responded to contract proposal to evaluate Anaconda's in-stack instruments. Contract will be finalized in October.

13. Schools and Training

EPA school in Denver on Quality Assurance in Air Pollution Systems was attended.
EPA school in Seattle on Statistical Analysis of Air Pollution Data was attended.

14. Public Hearings and Meetings

- a. Public Hearings Held:
Missoula, TSP, in Missoula - committee reports and proposed rule change comments
- b. Meetings Attended:
Fish and Game, re: Highway Impact Evaluation Group, Helena
Department of State Lands, Helena
EPA, Helena
Public Information Program, Helena
Montana Association of Land Use Planners, Great Falls

14. Public Meetings Attended: Cont.

Advisory Council, Helena, rule revisions
Billings industries, Helena, rule revisions
EPA, AQDHS-II system and EPA annual air quality report
Billings Industries, Billings, AQMA SO₂ monitoring meeting
Air shed meeting, Helena
MAPS, GCA, Helena
Lt. Governor, Helena, Cenex problems
Lt. Governor, Helena, Cenex request for declaratory ruling on sulfur plant testing
Petrolane, Helena, permit application for gas sweetening plant

c. Intra-Staff Meetings:

Legal Division, Billings industries
Staff, ASARCO Troy project,
Staff, engineering section budget
Staff, S.E.Coal

15. Public Information Requests

Clean Air Act 2
Rules and Regs 9
General Information 3

16. N.A.

17. Other

Francis Mahon Deaconess Hospital in Glasgow has been requested twice to submit construction permit application for incinerator. No response received.

First draft of Air Quality Bureau statement of policy and organization of quality assurance program written.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

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August 1977

Pollutant: TSP

Units: ug/cu meter

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Months	
140	Morton Res.	73	148	162	48.1	8	
	Big Horn Co.						
	Warren Ranch	108	108	26.0	8		
	Big Horn Co.						
	Lockwood School	74	137	137	52.4	8	
	Billings						
	Knoll	57	163	163	41.1	8	
	Billings						
	City Hall	81	165	165	62.2	8	
141	Billings						
	Grand Ave. Sch.	55	155	155	55.5	8	
	Billings						
	Laurel Jr. High	52	150	150	41.5	8	
	Laurel						
	Hospital Roof	71	225	225	45.7	8	
	Great Falls						
	Fire Sta. #1	72	860	860	71.9	8	
	Great Falls						
142	10th Ave. S.	143	161	161	87.3	3	
	Great Falls						
	Hiway Jct.	79	121	250	45.0	8	2 exc. Fed Sec Std
	Anaconda						1 exc Mt Pri Std
	McKinley Res.	217	217	217	54.0	8	
	Granite Co.						
	Greely School	100	226	226	86.7	7	2 exc. Fed Sec Std
	Butte						1 exc. Fed Pri Std
	Climan Constr.	297	297	297	84.8	4	
	Butte						
	Atkins Res	58	130	130	46.0	8	
	Yorkville	52	46	46	23.7	8	
	Rocky Mtn. Co.	55	64	64	16.1	8	
	Timber Lake						

Pollutant: TSP

Units: ug/cu meter

	AREA	HIGH READING			ARITHMETIC AVER.		
NOCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Meters of Data	Comments
142	Microwave	52	103	103	27.4	8	
	Jefferson Co.						
	212 E. Pacific	75	140	187	67.7	8	
	Lewis & Clark Co.						
	Kohler Res.	300	300	300	157.6	1	7 exc. Fed Sec Std
143	Three Forks						1 exc. Fed. Pri
	Phalaka	101	535	535	79.0	6	
	Carter Co.						
	Littlefield Hill	30	45	50	19.1	8	
	Miles City						
	Glendive	10	102	102	26.2	8	
	Dawson Co.						
	Lane Deer	13	243	243	20.3	6	
	Rosebud Co.						
	Pt. Neek	45	91	91	32.1	8	
	McDermott Co.						
	Broadus	28	275	27.2	8		
	Bozeman Riv. Co.	53	93	93	35.8	8	
	Colstrip						
	Border Site	36	107	107	37.1	7	
	Soobey	242	260	204	111.4	8	
144	Porter Res.						
	Courthouse	137	295	342	92.2	8	
	Missoula						
	Thompson Co.	148	148	214	52.3	8	
	Frenchtown						
	Missoula Co.	88	255	346	47.4	8	
	Missoula						
	Thompson Co.	98	226	226	87.7	8	
	Thompson	171	171	171	55.5	6	
	Thompson	70	255	255	44.6	5	1 exc Fed Sec Std
	Thompson						

Pollutant: Visc. Cont. Data

Units

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Cons.	
140	Carlson Monoxide 27th & Montana	8.40	16.00	27.50	2.538	8	
141	Billings 10th Ave. So.	7.30	7.30	7.30	1.840	2	
142	Great Falls Alpine West	2.50	3.70	3.70	0.472	3	
144	Hiway Jct. Missoula	***					
140	Hydrocarbons 27th & Montana	5.70	6.90	10.20	2.390	8	
143	Billings Nitric Oxide BN Site	0.04	0.10	0.10	0.027	3	
140	Colstrip Nitrogen Dioxide 27th & Montana	0.18	0.18	0.18	0.020	7	
142	Billings Alpine West	0.06	0.08	0.08	0.012	3	
143	Butte BN Site	0.07	0.13	0.13	0.020	6	
143	Colstrip Oxides of Nitrogen BN Site	0.05	0.12	0.12	0.037	3	
	Colstrip						

Pollutant: Visc. Cont. Data

Units

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Cons. of Data	
140	Phone 27th & Montana						
	Billings	0.06	0.08	0.08	0.020	8	
142	Alpine West						
	Butte	0.15	0.15	0.15	0.061	2	
140	Sulfur Dioxide 27th & Montana						
	Billings	0.05	0.20	0.20	0.002	8	
	Laurel Farm						
	Billings	0.36	0.63	0.74	0.051	8	1 exc. Mt. 1 hr.
142	East Stack						
	E. Helena	0.19	0.44	0.44	0.011	8	
	Microwave						
	E. Helena	1.00	1.40	1.40	0.010	8	1 exc. Mt. 1 hr.
	Saddle Mountain						
	E. Helena						
	Topwell Bldg.						
	Helena						
	Thompson						
	Anaconda	3.20	3.51	3.51	0.022	8	1 exc. Nat 3 hr.
	Hiway Jct.						
	Anaconda	0.95	1.46	1.58	0.025	8	1 exc Nat 3 hr.
	Will Creek						
	Anaconda	0.32	0.88	1.16	0.017	8	2 exc Mt. 1 hr.
	Post Office						
	Anaconda	0.68	1.05	1.05	0.011	8	2 exc. Mt. 2 hr.
143	BN Site						
	Colstrip	0.0	0.1	0.1	0.001	8	

* Site no longer submitting data

*** data not available at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

August, 1977

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Pollutant: Misc. Indicators

Units:

AREA		HIGH READING		ARITHMETIC AVER.			Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mths. of Data	
142	Millersburg Powell Co. Lahman's Powell Co. N. Ac. Hwy Powell Co. Ramsay West S11. Row Co. ESE Stauffer S11. Row Co.	mp/sq mi/mi days					
143	BN Site Colstrip						
144	Dahlboms Mt. Bx. Flathead Co. Anaconda South Flathead Col Glac. Park #1 Glac. Nat. Park Glac. Park #2 Glac. Nat. Park Glac. Park #3 Glac. Nat. Park	1.030 27.480 0.210 0.210 0.210 0.250	1.610 27.480 0.640 0.580 0.580 0.560	1.710 27.480 0.640 0.580 0.580 0.560	0.774 6.761 0.322 0.405 0.380	8 8 8 8 8	

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING		ARITHMETIC AVER.			Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mths. of Data	
142	Florinville Plateau Burrant Canyon Deerledge Co. N. Ac. Hwy Powell Co. NW on 1411 Powell Co. Ramsay West S11 Row Co. ESE Stauffer S11. Row Co.	mp/sq mi/mi days					
143	BN Site Colstrip						
144	Tankettle #6 Flathead Co. Anaconda South Flathead Co. Trailer MAC Flathead Co. Glac. Park #1 Glac. Nat. Park Glac. Park #2 Glac. Nat. Park Glac. Park #3 Glac. Nat. Park	37.850 1.460 0.190 0.190 0.270	37.850 2.900 0.610 0.610 0.470	37.850 2.060 0.610 0.610 0.470	9.166 1.301 0.414 0.380	7 5 5 8	

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING		ARITHMETIC AVER.			Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mths. of Data	
141	Mountain States Great Falls Fire Sta. #1 Great Falls Fairgrounds Great Falls SULFATION RATE - mp O ₂ /100 sq cm	20.00 13.78 11.15	48.15 23.75 31.46	48.15 25.03 31.46	23.60 16.71 14.60	8 7 8	
140	3/8 mi NE Loop Billings East of Laurel Billings Hill-Bell Trucking Billings Stock Car Track Great Falls Phillips Ref #1 Great Falls Phillips Ref. E Great Falls Microwave S. Helena Hill-Key Jct. Anaconda C-Hill Anaconda BN Site Colstrip	1.180 1.110 0.850 0.0 0.444 0.399 0.300	4.380 3.220 1.840 0.607 0.629 0.575 0.650	4.800 3.220 1.840 0.607 0.629 0.575 0.650	2.280 1.720 1.138 0.248 0.435 0.355 0.373	7 7 7 6 6 8 7	

Pollutant: Misc. Bubblers Data

Units: ppm

AREA		HIGH READING		ARITHMETIC AVER.			Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mths. of Data	
140	Salt Flat Lockwood School Billings 3/8 mi NE Loop Billings						
143	Scobey Daniels Co. Ft. Peck McTone Co. Lane Deer Rosebud Co. BN Site Colstrip						
143	Nitrogen Dioxide Scobey Daniels Co. Ft. Peck McTone Co. Lane Deer Rosebud Co. BN Site Colstrip						

*** data not available at time of report

* site no longer submitting data

** - no data available - computer program malfunction

